

INVESTIGATION OF CO IN EXHALATE (BIOMARKER OF EXPOSURE) OF ADULT SMOKERS SMOKING ELECTRICALLY HEATED AND CONVENTIONAL CIGARETTES.

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ACCORD, a "potential reduced-exposure product" (IOM, 2001) is a cigarette (3mg tar, 0.2mg nicotine) made of conventional tobacco filler rolled in a tobacco mat and smoked in a battery operated lighter, which heats the tobacco during puffing. In smoking machine experiments according to FTC guidelines the electrically heated cigarette (EHC) showed marked reduction of CO in mainstream smoke as compared to a Kentucky reference cigarette, 1R4F. EHC-1 and EHC-2 have different filters. The purpose of the study was to determine whether CO in exhalate differs among smokers of EHC-1, EHC-2, CC (conventional cigarette) and no-smoking.

Study population: 110 healthy, adult male and female subjects smoking 5 - 25 CC (10.8mg tar) per day.

Study design: Controlled, randomized, stratified for number of cigarettes smoked per day. After consenting, subjects were screened to meet inclusion and exclusion criteria. Eligible subjects were confined for 10 days to control for smoking (number of cigarettes per day). Baseline investigations were on day 2, thereafter subjects were randomized to one of 5 groups: cigarettes with 10.8mg tar; cigarettes with 5.8mg tar; EHC-1; EHC-2; no-smoking.

Investigations: CO in exhalate was measured using a Micro Medical CO Meter on days 2 (baseline), 3, and 10 of the confinement during 2 occasions: late afternoon and evening.

Data analysis: Data were calculated as change from baseline for each subject for the afternoon and evening values. Mean values per group were calculated. Hypothesized results are that CO in exhalate are lower in EHC smokers. In this study, results from one-sided statistical tests are used to confirm this hypothesis.